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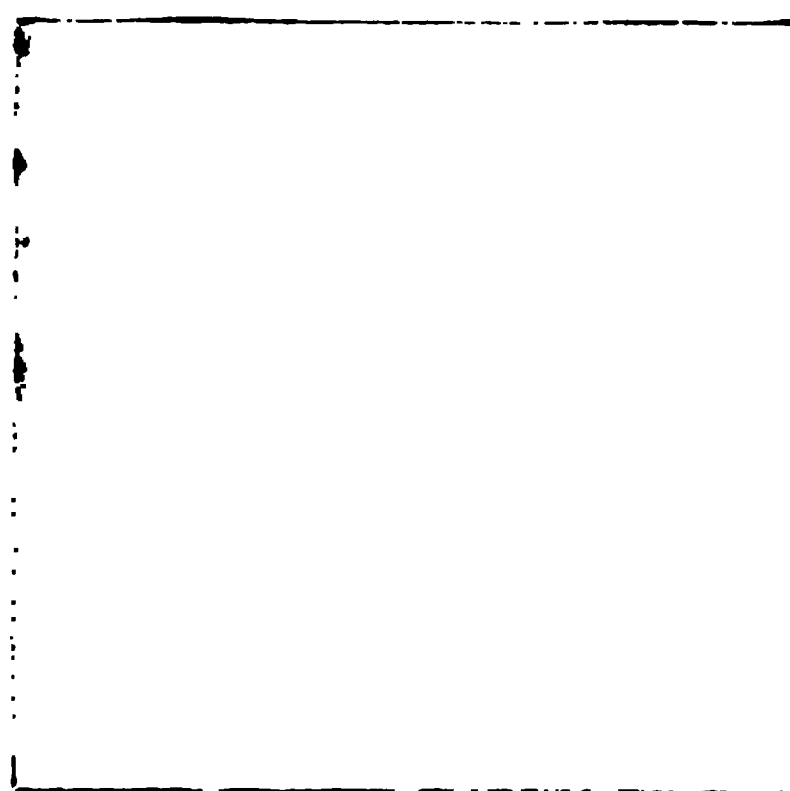


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The Branner Geological Lib



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BULLETIN

OF THE

UNITED STATES

GEOLOGICAL SURVEY

No. 127



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*J C Branner*  
UNITED STATES GEOLOGICAL SURVEY

CHARLES D. WALCOTT, DIRECTOR

CATALOGUE AND INDEX

OF CONTRIBUTIONS TO  
NORTH AMERICAN GEOLOGY

1732-1891

BY

NELSON HORATIO DARTON



WASHINGTON  
GOVERNMENT PRINTING OFFICE  
1896

127



# CATALOGUE AND INDEX OF CONTRIBUTIONS TO NORTH AMERICAN GEOLOGY.

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BY N. H. DARTON.

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## INTRODUCTION.

The scope of this work includes geologic literature published in North America, and such literature on North America (excepting Greenland and Central America) wherever published. Chronologically it includes publications from 1732 to those received prior to the close of 1891.

On pages 11-14 is given a list of serials examined. It covers the principal publications in which geologic contributions have appeared, excepting some odd volumes which were not accessible to me. In official literature there have been examined all the reports in Prime's catalogue,<sup>1</sup> with some additional and all later ones. Many privately published separate works are included, a few of which are known only from notices in reviews or book lists. Paleontologic papers which are purely biologic are not included, nor are papers on mineralogy in which rocks are not described or discussed.

The entries are comprised in two classes, which are arranged in single alphabetic sequence. They are as follows:

1. *Principal entries*.—These consist of full titles of separate contributions, classified by authors, with chronologic subarrangement, together with as much of the usual bibliographic information as appears necessary in a work of this kind. All composite works are segregated into the separate contributions of individual authors as far as practicable. The date is that of the volume imprint of the earliest regular publication of the contribution whenever possible. Accordingly, contributions published in proceedings of societies are given the imprint date of the volume in which they are contained. The size of the volume is given only when it is other than octavo. The extent of papers less than a page in length is indicated thus: ( $\frac{1}{8}$  p.), ( $\frac{1}{4}$  col.), (3 lines). Place of publication is given for official and separate publications and some obscure journals. Information which I have supplied is placed within brackets.

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<sup>1</sup>Catalogue of official reports on geological surveys of the United States and Territories and British North America. Am. Inst. Mining Engineers, Trans., vol. 7, pp. 455-522; vol. 8, pp. 466-478; vol. 9, pp. 621-633.

2. *Subject index references.*—These are geographic, stratigraphic, and miscellaneous geologic headings, under which are listed condensed titles of the papers, and the author's name for cross reference to the principal entry. The subarrangement is chronologic. A key to these references is given on pages 7–10. A few general text-books of geology and very general papers have not been indexed.

I am indebted to the catalogue by Prime, the lists of maps by Jules Marcou and J. B. Marcou,<sup>1</sup> lists of papers on the Lake Superior copper region by J. D. Whitney,<sup>2</sup> a bibliography of Texas, Arkansas, Louisiana, etc., by J. B. Marcou (in manuscript), and to many gentlemen for information or advice. I am also indebted for special courtesies to the librarians of the Academy of Natural Sciences at Philadelphia, the New York Academy of Sciences, the Boston Society of Natural History, the Astor Library of New York, and the Boston Public Library.

Additional references or information for a supplement to this catalogue will be gratefully received by the author, care of the United States Geological Survey, Washington, D. C., U. S. A.

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<sup>1</sup> Bull. U. S. Geol. Survey No. 7, 1884.

<sup>2</sup> Bull. Mus. Comp. Zool. Harvard College, vol. 7, 1884.

## CLASSIFIED KEY TO THE SUBJECT ENTRIES.

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### I. GEOGRAPHIC SUBJECTS.

**Africa.**

**Alabama.**

**Alaska.**

**Arizona.**

**Arkansas.**

**Asia.**

**Australasia.**

**Bermuda.**

**California.**

**Canada, with subheadings as follows:**

Provinces of Quebec and Ontario, and Canada in general.

New Brunswick.

Nova Scotia, Prince Edward Island, and Cape Breton Island.

Newfoundland.

Labrador.

Manitoba to Rocky Mountain region.

British Columbia.

Northern British America (and Greenland).

**Central America.**

**Colorado.**

**Connecticut.**

**Dakotas.**

**Delaware.**

**East Indies.**

**Europe.**

**Florida.**

**Georgia.**

**Hawaiian and other Pacific islands.**

**Idaho.**

**Illinois.**

**Indiana.**

**Indian Territory (and Oklahoma).**

**Iowa.**

**Kansas.**

**Kentucky.**



Louisiana.  
 Maine.  
 Maryland (including District of Columbia).  
 Massachusetts.  
 Mexico.  
 Michigan.  
 Minnesota.  
 Mississippi.  
 Missouri.  
 Montana.  
 Nebraska.  
 Nevada.  
 New Hampshire.  
 New Jersey.  
 New Mexico.  
 New York.  
 North Carolina.  
 Ohio.  
 Oregon.  
 Pennsylvania.  
 Rhode Island.  
 South America.  
 South Carolina.  
 Tennessee.  
 Texas.  
 Utah.  
 Vermont.  
 Virginias.  
 Washington.  
 West Indies.  
 Wisconsin.  
 Wyoming.

## II. STRATIGRAPHIC SUBJECTS.

**Archean and Algonkian** (including all unclassified crystalline rocks),  
 with subheadings as follows:

New England.

New York, Pennsylvania, New Jersey.

Maryland to Alabama.

Great Lakes region (Michigan, Wisconsin, Minnesota, and Canada  
 contiguous to lakes Superior and Huron).

West of the Mississippi River (excepting Minnesota).

Eastern (and northern) Canada.

Western Canada (Lake of the Woods region to the Pacific).

General.

**Cambrian**, with subheadings as follows:

New England.

New York, Pennsylvania, New Jersey.  
Southern Appalachians (Maryland to Alabama).  
Lakes Superior, Michigan, and Huron region.  
Dakota, Iowa, Nebraska.

Missouri.

Texas.

Rocky Mountains to Pacific coast.

Canada (excepting adjoining Lake Superior).

**Carboniferous**, with subheadings as follows:

New England.

New York, Pennsylvania, Maryland, Virginia.

Ohio.

Kentucky, Tennessee, Alabama, Georgia.

Michigan.

Illinois, Indiana.

Iowa, Nebraska, Kansas, Missouri, Arkansas, Indian Territory,  
Texas.

Rocky Mountains to the Pacific coast.

Canada (including all of British America).

General.

**Cretaceous**, with subheadings as follows:

Atlantic coast region.

Gulf region (Alabama to Louisiana to Kentucky).

Dakota and Minnesota to Texas.

Rocky Mountains to Great Basin region.

Pacific States.

Canada.

General.

**Devonian**, with subheadings as follows:

New England.

Appalachian (New York to Alabama).

West of Appalachians to the Mississippi and Minnesota.

West of the Mississippi, excepting Minnesota.

Canada (including all of British America).

General.

**Juratrias**, with subheadings as follows:

Massachusetts to North Carolina.

Eastern Canada.

Dakota to Texas.

Rocky Mountain region.

California to Washington.

Western Canada and Alaska.

General.

**Pleistocene**, with subheadings as follows:

New England.

New York.

Pennsylvania.

New Jersey.

Maryland, Delaware, Virginia.

North Carolina, South Carolina, and Georgia region.

Gulf region, Florida to Texas and Arkansas.

Ohio, Indiana, Illinois, Kentucky, Tennessee.

Minnesota, Michigan, Wisconsin.

Iowa, Missouri, Nebraska, Kansas region.

Rocky Mountains to Great Basin.

Pacific States.

Eastern Canada.

Western British America.

Alaska.

General.

**Silurian, with subheadings as follows:**

New England.

Appalachian (New York to Alabama).

West of the Appalachians to the Mississippi River and Minnesota.

West of the Mississippi River, excepting Minnesota.

Canada (including all of British Columbia).

General.

**Tertiary, with subheadings as follows:**

Atlantic coast region (Massachusetts to Georgia).

Gulf region (Florida to Texas and Kentucky).

Dakotas, Nebraska, Kansas.

Rocky Mountains to Great Basin.

Pacific States.

Canada.

Arctic and Alaska.

West Indies.

General.

### III. OTHER SUBJECTS.

**Geologic philosophy, with subheadings as follows:**

Chemic geology (excepting metamorphism and rock decay).

Origin of coal, petroleum, etc.

Dynamic geology.

Petrology.

Glaciology.

Geological climate.

Volcanism.

Rock decay.

Degradation.

Sedimentation.

Geomorphy.

Coral reefs.

Miscellaneous.

**Petrography.**

## LIST OF SERIALS EXAMINED.

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- Akademie der Wissenschaften, Sitzungsberichte, vols. 1-68. Wien.
- Albany Institute, Proceedings, vols. 1, 2, and parts 1-2 of vol. 3. Albany, N. Y.
- Transactions, vols. 1-10. Albany, N. Y.
- American Academy of Arts and Sciences, Proceedings, vols. 1-26. Boston, Mass.
- Memoirs, 1st series, and vols. 1-9, new series. Boston, Mass.
- American Anthropologist, vols. 1-2. Washington, D. C.
- American Association for the Advancement of Science, Proceedings, vols. 1-39. Salem, Mass.
- American Association of Geologists and Naturalists, Transactions, vol. 1 to end of 1848. Boston.
- American Chemical Journal, vols. 1-5. New York.
- American Geographical Society, Bulletin, vols. 19-21. New York.
- American Geologist, vols. 1-8. Minneapolis, Minn.
- American Journal of Conchology, vols. 1-7. Philadelphia.
- American Institute of Mining Engineers, Transactions, vols. 1-19. Easton, Pa., and New York, N. Y.
- American Journal of Science, 1st series, 2d series, and vols. 1-42, 3d series. New Haven, Conn.
- American Mineralogical Journal (Bruce), 1 vol.
- American Mining Gazette and Geological Magazine, 1 vol. New York.
- American Museum of Natural History, Bulletins, vol. 1 to vol. 3, p. 194. New York.
- American Naturalist, vols. 1-25. Philadelphia.
- American Philosophical Society, Proceedings, vols. 1-29 (to No. 135). Philadelphia.
- Transactions, 1st series, vols. 1-16 (part 3).
- American Quarterly Journal of Agriculture and Science, vols. 1-7. New York.
- Annals of Science, vol. 1; vol. 2, Nos. 1-4. Cleveland, Ohio.
- Appalachia, vols. 1-6. Boston.
- Boston Journal of Natural History, vols. 1-7. Boston.
- Boston Society of Natural History, Proceedings, vols. 1-25 (to part 2). Boston.
- Memoirs, vols. 1-4, No. 11, and anniversary volume.
- British Association for the Advancement of Science, Reports, vols. 1-60. London.
- Brookville Society of Natural History, Proceedings, Nos. 1-2. Brookville, Ind.
- Buffalo Society of Natural History, Bulletin, vols. 1-5 (to No. 3). Buffalo, N. Y.
- California Academy of Sciences, Transactions, vols. 1-7. San Francisco.
- Memoirs, vols. 1-2.
- Bulletins, vols. 1-5.
- Bulletins, vols. 1-2.
- Proceedings, vols. 1-2.
- Canada, Royal Society, Transactions, vols. 1-8. Montreal.
- Canadian Institute and Canadian Journal, 1st series, vols. 1-3; new series, vols. 1-15. Toronto.
- Proceedings, vols. 1-7. Toronto.
- Transactions, vol. 1. Toronto.
- Canadian Naturalist, 1st series; new series, vols. 1-10. Montreal.
- Canadian Record of Science, vols. 1-4. Montreal.
- Central Ohio Scientific Association, Proceedings, vol. 1, part 1.

- Central Ohio Scientific Society, Proceedings, vol. 1. Urbana.
- Chicago Academy of Science, Bulletin, vol. 1, Nos. 1-4, 6, 9. Chicago.
- Transactions, vol. 1.
- Cincinnati Society of Natural History, Journal, vols. 1-14, No. 2.
- Cincinnati Quarterly Journal of Science, vols. 1-2.
- Cleveland Academy of Sciences, Proceedings, No. 1.
- Colorado Academy of Sciences, Proceedings, vols. 1-3 (part 2). Denver.
- Congrès Géologique International, Comptes Rendus, 1st, 3d, and 4th sessions.
- Connecticut Academy of Sciences, Transactions, vols. 1-5. New Haven, Conn.
- Memoirs, vols. 1-7; vol. 8, part 1.
- Cornwall Royal Geological Society, Transactions, vols. 1-11. Penzance.
- Davenport Academy of Sciences, Proceedings, vols. 1-5, part 1. Davenport, Iowa.
- Denison University, Scientific Laboratories, Bulletin, vols. 1-5. Granville, Ohio.
- Des Moines Academy of Sciences, Bulletin, vol. 1, No. 1. Des Moines, Iowa.
- Deutsche Geologische Gesellschaft, Zeitschrift, vols. 1-42. Berlin.
- E. M. Museum of Geology and Archeology, College of New Jersey, vol. 1, No. 1. Princeton.
- Edinburgh Geological Society, Transactions, vols. 1-6 (to No. 2).
- Elihu Mitchell Scientific Society, Journal, 1883-1890. Raleigh, N. C.
- Elliott Society of Natural History, Journal, vol. 1, Nos. 1-2. Charleston, S. C.
- Proceedings, vol. 1, vol. 2 (to 1886).
- Engineering and Mining Journal, vols. 32-37, 40-42. New York.
- Knox Institute, Proceedings, vols. 1-6. Salem, Mass.
- Bulletin, vols. 1-22 (to No. 6).
- Knox Natural History Society, Journal, vol. 1. Salem, Mass.
- Forum, 1883, 1884. New York.
- Franklin Institute, Proceedings, vols. 1-127. Philadelphia.
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- Geologists' Association, Proceedings, vols. 1-12. London.
- Geological Magazine, vols. 2-12; 2d decade, vols. 1-10; 3d decade, vols. 1-8. London.
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- Quarterly Journal, vols. 1-47.
- Geologist, 1842-1848. London.
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- Geologische Gesellschaft zu Berlin, Zeitschrift, vols. 1-31.
- Glasgow Geological Society, Transactions, vols. 1-9 (to part 1).
- Geological and Scientific Bulletin, vol. 1, Nos. 2-7, 9-12. Austin, Tex.
- Geologiska Föreningens i Stockholm Förhandlingar, vols. 5-12 1-3.
- Hamilton Association, Journal and Proceedings, vols. 1-3. Hamilton, Ontario.
- Hartford Natural History Society, Transactions, No. 1. Hartford, Conn.
- Harvard College Museum of Comparative Zoology, Bulletin, vols. 1-22 to No. 24. Cambridge, Mass.
- ———— Memoirs, vols. 1-23 to No. 3).
- Illinois Natural History Society, Transactions, vol. 1. Springfield.
- International Congress of Zoology, American Committee's Reports, 1883.
- Iowa Academy of Sciences, Proceedings, 1887-1889. Des Moines.
- Iowa Historical Society, vols. 1-4. Des Moines, Iowa.
- Iowa State University, Laboratories of Natural History, Bulletin, vols. 1: 2 No. 1. Iowa City.
- Ireland, Royal Geological Society, Journal, vol. 17, part 2; vol. 18, part 2. Dublin.
- Johns Hopkins University, Circulars, Nos. 1-24. Baltimore.
- Journal de Zoologie, 3 vols. Paris.
- Kansas Academy of Sciences, Proceedings, vol. 2-22. Topeka.
- Kansas Board of Agriculture, Reports, 2d and 3d Annual and 1st and 2d Biennial. Topeka.



- Kansas City Review, vols. 1-8. Kansas City.  
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 Liverpool Literary and Philosophical Society, Proceedings, vol. 41. Liverpool.  
 London, Edinburgh, and Dublin Philosophical Magazine, new series, vols. 1-23.  
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 ——— Proceedings, vol. 1, part 1.  
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 Orleans County Society of Natural History, Transactions and Archives of Science, vol. 1, Nos. 1-6. Vermont.  
 Ottawa Naturalist, vols. 1-5. Ottawa.  
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 Pacific Coast Technical Society, Proceedings, vols. 1-3. San Francisco.  
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 ——— Journal, 1st series, new series, vols. 1-8; vol. 9, part 2.  
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 Santa Barbara Society of Natural History, Bulletin, vol. 1, No. 2. Santa Barbara, Cal.  
 School of Mines, Quarterly, vols. 1-12; vol. 13, No. 1. New York.  
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 Staten Island, Natural Science Association, Proceedings, 1886-1889.  
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 Texas, University of, School of Geology, Circular No. 1. Austin.  
 Vassar Brothers' Institute, Transactions, vols. 1-5. Poughkeepsie, N. Y.  
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 Wagner Free Institute, Transactions, vols. 1-3. Philadelphia.  
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# CATALOGUE AND INDEX.

## A.

**A.** Proofs that general and powerful currents have swept and worn the surface of the earth.

Am. Jour. Sci., vol. 11, pp. 100-104, 1826.

**Abbot, Henry L.** The physics of the Mississippi River.

Van Nostrand's Eng. Mag., vol. 20, pp. 1-6, 1879.

— **Humphreys, A. A., and.** Report upon the physics and hydraulics of the Mississippi River, upon the protection of the alluvial regions against overflow, and upon the deepening of the mouths. Based upon surveys and investigations [etc.]. U. S. Army, Corps of Topographical Engineers, Prof. papers, No. 4, xiii, 456, cxlvii pages, 20 plates, 4<sup>c</sup>, Philadelphia, 1861. Also Washington, 1861. Again, 214 pages, 1 plate, Washington, 1867. With additions, 691 pages, 25 plates (Prof. papers, No. 13), Washington, 1876.

Reviewed by J. B. Eads, Van Nostrand's Eng. Mag., vol. 19, pp. 211-229, 1878.

**Abbott, C. C.** Primitive industry; or illustrations of the handiwork in the stone, bone, and clay of the native races of the northern Atlantic seaboard of America.

Peabody Acad. Sci., Salem, 1881. [Not seen.]

— A recent find in the Trenton gravels. Boston Soc. Nat. Hist., Proc., vol. 22, pp. 96-104, 1884.

**Abbott, Charles A.** On the antiquity of man in the valley of the Delaware.

Boston Soc. Nat. Hist., Proc., vol. 23, pp. 424-426, 1888.

**Abert, J. J.** Annual report Bureau of Topographical Engineers, 1839.

Message Prest. U. S., 26th Cong., 1st sess., H. R. Ex. Doc. No. 2, pp. 632-893 [Washington, 1840].

**Abert, J. W.** Journal from Bent's Fort to St. Louis in 1845.

Message Prest. U. S., 29th Cong., 1st sess., Senate Doc. No. 438, pp. 2-75, 12 plates, maps, Washington, 1846.

— [Notes from Fort Leavenworth to Bent's Fort.]

Emery's notes of a military reconnoissance, pp. 386-414, Washington, 1848.

— Report on examination of New Mexico in the years 1846-47.

Report Sec. War, 30th Cong., 1st sess., Senate Doc. No. 23, pp. 3-130, 24 plates, map [Washington, 1848]; 30th Cong., 1st sess., Ex. Doc. No. 41, pp. 417-546 [Washington, 1848].

**Abert, S. J.** Report [on a survey and reconnoissance] of the Arkansas River.

Letter Sec. War, 41st Cong., 2d sess., H. R. Ex. Doc. No. 295, pp. 3-33 [Washington, 1870].

**Abert, S. T.** Examination of Catawba River from South Carolina line to Old Fort, North Carolina.

U. S. Army, Chief of Engineers, Report for 1876, part 1, pp. 367-376, Appendix G, 1876.

— Geology.

Letter from the Acting Secretary of War, transmitting report of S. T. Abert on the survey of a line to connect the waters of the Cape Fear and Neuse rivers [etc.], 44th Cong., 1st sess., Senate Ex. Doc. No. 35, pp. 15-18, 1876.

**Adams, C. B.** First annual report on the geology of the State of Vermont, 92 pages, map, Burlington, 1845.

Includes letter by E. Hitchcock, pp. 64-68; report by Hall and Thompson, pp. 68-78, and letter by Thayer, pp. 77-79.

— Second annual report on the geology of the State of Vermont, 267 pages, Burlington, 1846.

Includes notes by S. R. Hall, pp. 174-214; letter by E. Hitchcock, pp. 247-252; report by Z. Thompson, pp. 259-261.

**Adams, C. B.** Notice of an example of apparent drift furrows dependent on structure.

*Am. Jour. Sci.*, 2d series, vol. 3, pp. 433-434, 1847.

— Third annual report on the geology of the State of Vermont, 32 pages, Burlington, 1847.

— Observation on a polished rock [Winooski, Vt.].

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*Am. Jour. Sci.*, 3d series, vol. 5, p. 110 (4 p.), 1848.

*Am. Quart. Jour. Agri. and Sci.*, vol. 6, pp. 215-216 (4 p.), (October number, 1848).

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Spencer, J. W.

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LAND, AND CAPE BRETON ISLAND.**

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1829. Geology and mineralogy of  
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1840. Handbook of Nova Scotia,  
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1841. Coal of Cape Breton, Brown, R.

1842. Excursion in Prince Edward  
Island, Dawson, J. W.

1843. Coal of Nova Scotia and age  
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Lyell.

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1846. Geologic map of Nova Scotia,  
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Cape Breton, Brown, R.

1847. Gypsiferous strata of Cape  
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1848. Coal fields of Caribou Cove,  
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Scotia, Dawson, J. W.

1849. Coloring matter of red sand-  
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Dawson, J. W.

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1852. Notes on red sandstones of  
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1853. Reptilian remains in tree trunk  
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son, J. W.

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Poole.

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Dawson, J. W.

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J. W.

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1856. Fossil wood from Prince  
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1857. Parallelism of rocks of Nova  
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1858. Coal fields of United States  
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1862. Saurian Vertebrata from Nova Scotia, Marsh.  
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1864. Geology of Arisaig, Honeyman.  
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1868. Subdivisions of Acadian Carboniferous limestones, Hartt, Dawson, J. W.
1869. Gold deposits of Nova Scotia, Hind.  
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1870. Submerged forest trees in Cumberland basin, Hamilton, P. S.  
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**1885. Cambrian faunas of North America, Walcott.**

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Limestone of East River, Nova Scotia, Gilpin.

Lower Cambrian, Nova Scotia, Faribault.

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1887. Cambrian of Cape Breton, etc., Matthew.

1888. Pictou and Colchester, Fletcher.

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Boulder in Halifax coal, Spencer, J.

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1890. Cambrian organisms in Acadia, Matthew.

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Gleanings in Nova Scotia and Cape Breton, Honeyman.

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1891. New horizon in St. John group, Matthew.

Gold series, Nova Scotia, Faribault.

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1891. Auriferous series of Nova Scotia, Monckton.

Cambrian group of North America, Walcott.

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1854. Origin of materials in New Brunswick formations, Jackson, C. T.

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1856. Second bed of coal in Albert mine, Hayes, A. A.

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1858. Coal fields of the United States, etc., Rogers, H. D.
1861. Coal and albertite of New Brunswick, Leidy.  
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1864. Notes on New Brunswick, Bailey, L. W.  
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1865. Copper rocks of southeastern New Brunswick, Matthew.  
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1866. Map of Canada, etc., Logan and Hall.
1868. Grand Manan, Verrill.

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1868. Huronian and Lower Carboniferous of New Brunswick, Matthew.  
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1869. Origin of albertite and allied minerals, Peckham.  
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1870. Geology of New Brunswick and Nova Scotia, Hind.  
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1871. Metalliferous deposit of Gloucester, Henwood.  
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1872. Northwestern New Brunswick, Robb.  
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1874. Geology of southern New Brunswick, Hunt, T. S.  
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1875. Post-Pliocene near Bathurst, Paisley.
1876. Iron ores of Carleton County, New Brunswick, Ells.  
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1878. A month in New Brunswick, Honeyman.  
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1879. Pre-Silurian of southern New Brunswick, Ells.  
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Huronian and Cambrian of southern New Brunswick, Bailey, L. W.  
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1882. Cambrienne du Nouveau-Brunswick, Matthew and Bailey.
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1884. Albert and Westmoreland counties, Huntington, J. H.

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1886. New primordial fossils, Whitfield, R. P.  
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1887. Map of United States, Hitchcock, C. H.  
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1888. Relations between geology of Maine and New Brunswick, Bailey.  
New genus of Silurian fishes, Matthew.

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1888. Basal series of Cambrian in Acadia, Matthew.  
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 Northern New Brunswick, Bailey and McInnes.  
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1890. Surface geology of southern New Brunswick, Tyrrell.  
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1891. Age of the Catskill flora, Dawson, J. W.  
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1839. Preliminary report on Newfoundland, Jukes.
1842. Excursions in Newfoundland in 1839 and 1840, Jukes.
1843. Report on survey of Newfoundland, Jukes.
1844. Newfoundland in 1842, Bonycastle.
1846. Bonaventure River district, Murray, A.

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1851. Subsidence of shore of Newfoundland, Perley.
1862. Geology and physical characteristics of Newfoundland, Perley.
1866. Report of survey of Newfoundland for 1865, Murray, A.  
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1867. Report of survey of Newfoundland for 1866, Murray, A.
1868. Survey of Newfoundland for 1868, Murray, A.  
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1872. Rocks of Rocky River survey, Newfoundland, Murray, A.  
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1873. Geologic map of Newfoundland, Murray, A.
1874. Coal and lower Carboniferous of western Newfoundland, Gilpin.  
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1875. Gander River, Murray, A.  
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1886. Olenellus (?) Kjerulfi in America, Matthew.
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1888. Copper mining at the Cove, Newfoundland, Garland. Taconic of Emmons, Walcott, Miller, S. A.
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1829. Geology of Labrador coast, Baddeley, F. H.

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1851. Glaciation on shore of Labrador, Wyman. Subsidence of shore of Labrador, Wyman.
1860. Coast of Labrador, Lieber. Tertiary fossils from Labrador, Maine, etc., Dawson, J. W.
1861. Expedition nach Labrador, Lieber.
1864. Supposed glacial drift in Labrador and western Canada, Hind.
1866. Drift phenomena of Labrador, Packard. Glacial phenomena of Labrador and Maine, Packard.
1877. Pan ice work and glacial marks in Labrador, Packard.
1878. Northeastern coast of Labrador, Hind. Geology of Labrador coast, Wilkins.
1882. Glacial marks in Labrador, Packard.
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1887. Physical geography, Packard.
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REGIONS—Continued.**

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*Ripple marks*, Gilbert.  
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1890. Sand transportation by rivers, Graham.  
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1818. Origin of prairies, Wells, R. W.
1823. On changes in geology of North America east of Stoney Mountains, Maclure.
1830. Diluvial furrows and scratches, Thomas, D.
1833. Report on Massachusetts, Hitchcock, E.
1842. Elements of geology and outline of geology of North Carolina, Mitchell, E.
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1880. Building stones of the United States, Merrill, G. P.  
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1869. Rock ruins, Niagara Falls, Hyatt.

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1875. Scott and Jefferson counties, Ind., Borden.

Bond, Fayette, and other counties, Illinois, Broadhead.

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Report on White, Clay, Cumberland, Cole, Douglas, Williams, and Franklin counties, Ill., Worthen.

Gallatin and Saline counties, Ill., Cox, E. T.

Sixth report of survey of Indiana, Cox, E. T.

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1876. Reconnaissance in lead region, Kentucky, Norwood.

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Observation on lakes of northern Indiana, Levette.

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Tennessee, agriculture, mineral wealth, etc., Killebrew.

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Vegetal remains in drift of the Northwest, Winchell, N. H.

1877. Topography and geology of Nashville, Safford.

Glacial deposits of two periods in Boone County, Ky., Sutton.

American surface geology, Wood, S. V.

1878. Geology of Brown County, Ohio, Herzer.

Ashland, Wayne, and Holmes counties, Ohio, Read, M. C.

Geology of Franklin County, Ohio, Orton, E.

Geology of Warren, Butler, Preble, and Madison counties, Ohio, Orton, E.

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1878. Perry and parts of Hocking and Athens counties, Ohio, Andrews, E. B.  
Geologic structure of Ohio, Newberry.  
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Geology of Coshocton County, Ohio, Hodge, J. T.  
Geology of Darke County, Ohio, Lindemuth.  
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Geology of Carroll and other counties, Ohio, Stevenson.  
Logan and Champaign counties, Ohio, Hill, F. C.
1879. Glacial action, Kelleys Island, Whittlesey.  
Geology of Lagrange County, Ind., Edmunds, E. S.  
Glacial deposits in Boone County, Ky., Sutton, C.  
Report on Harrison and Crawford counties, Ind., Collett.  
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Macfarlane's Geological Railroad Guide, Kentucky, Procter.  
Macfarlane's Geological Railroad Guide, Ohio, Newberry.  
Macfarlane's Geological Railroad Guide, Tennessee, Safford.
1880. Geology of Monroe County, Ind., Greene, G. M.  
Chemical report, survey of Kentucky, Peter.
1882. Correlation of eastern and western terminal moraines, Chamberlin, T. C.  
Geology of Shelby County, Ind., Collett.  
Geology, mines and quarries, Indiana, Collett.

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1882. Geology of Fountain County, Ind., Brown, R. T.  
Gold-bearing drift of Indiana, Sutton.  
Glacial phenomena of North America and man on the Delaware, Wright, G. F.  
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Evidence of pre-Glacial origin of basins of Lakes Erie and Ontario, Claypole.  
Geology of Bartholomew County, Ind., Elrod.
1883. Lasalle County, Ill., Worthen.  
Terminal moraine of second Glacial period, Chamberlin, T. C.  
Ocherous deposits of Kentucky and Indiana, Warder.  
Terminal moraine of eastern United States, Wright, G. F.  
Wright's ice dam at Cincinnati, Lesley, J. P.  
Southern boundary of glaciation in Ohio, Wright, G. F.  
Evidences of glaciation in Kentucky, Stevens.  
Erratic pebbles in Licking Valley, Squier.  
Twelfth report of department of geology, Indiana, Collett.  
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Illinois, remains from loess, McAdams.  
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1883. Glacial boundary, Wright, G. F.  
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1884. Lower coal measures of Ohio,  
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Survey of Hamilton and Madison  
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The Post-Pliocene of America,  
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1884. Physio-geographic and agricul-  
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1885. Chemical analyses, survey of  
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Driftless area, Chamberlin and  
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Microstructure of certain boulder  
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Glacial origin of Presque Isle,  
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1886. Hancock County, Ind., Brown,  
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Geology of Cincinnati, James,  
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Quaternary of Illinois, Worthen.
1887. Boulders along Appalachian  
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Lake age in Ohio, Claypole.  
Loess and clay analyses, Riggs.  
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1888. Age of Ohio gravel beds, Wright,  
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1888. Report—division of Glacial geology, United States Geological Survey, Chamberlin, T. C.
1889. Forest bed beneath intermorainic drift, Leverett.
- Glacial phenomena in northeastern Illinois and Indiana, Leverett.
- Raised beaches of Lake Michigan, Leverett.
- Glacial phenomena in northern Indiana, Leverett.
- Implement in drift, Cresson, Wright, G. F.
- Origin of loess, Campbell.
- Terminal moraine near Louisville, Bryson.
- Mason County, Ky., Linney.
- Central basin of Tennessee, Kennedy.
1890. Glacial phenomena of northern Illinois and Indiana, Leverett.
- Climate indicated by interglacial beds, Leverett.
- Deep well at Dixon, Ill., Tiffany.
- Orange sand formations, McGee, Procter.
- Vivianite, Kentucky, Dudley.
- Wetwoods, Bryson.
- Ice age in North America, Davis, W. M.
- History of upper Ohio region, White, I. C.
- Pre-Glacial channels at Falls of the Ohio, Bryson.
- Interval between Glacial epochs, Chamberlin, T. C.
- Boulder belt and boulder trains, Chamberlin, T. C.
- Warren's Geography, Brewer.
- Macfarlane's Railway Guide, Chamberlin, Collett, Lesley, Orton, Procter, Safford, White, I. C.; Worthen, Wright, G. F.
- Lake ridges of Ohio, Wright, G. F.
- Disposition of boulders, Wright, G. F.
- Introduction—Glacial boundary by Wright, Chamberlin, T. C.
- Lake Michigan glacier and channels, Guthrie.
- Drift deposits of Illinois, Worthen.

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1890. Economical geology, Illinois, Worthen.
1891. History of Ohio River, James, J. F.
- Flood plains and the mound builders, Peet.
- Man and the Glacial period, Wright, G. F.
- Natural and artificial terraces, Ohio, Peet.
- Map of Kentucky, Procter.
- Age of orange sands [Illinois], Salisbury.
- A second driftless area in the Mississippi Valley, Salisbury.
- Artesian wells of Memphis, Tenn., Safford.
- Striæ and slickensides at Alton, Ill., Todd.
- Criteria of englacial and subglacial drift, Upham.
- Glacial grooves on Kelleys Island, Wright, G. F.
- Relationship of Pleistocene to pre-Pleistocene formations south of limit of glaciation, Chamberlin and Salisbury.
- Extension of pre-Pleistocene gravels in basin of the Mississippi, Salisbury.
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- Deep boring near Akron, Ohio, Claypole.
- Megalonyx in Holmes County, Ohio, Claypole.
- Attitude of United States during Glacial period, Chamberlin, T. C.
- Review of Quaternary, Upham.
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1821. Travels through the Northwest, Schoolcraft.
- Observations on northwest portion of Lake Huron, Bigsby.
1824. Expedition to sources of St. Peters River, Keating.
- Notes on Lake Huron, Bigsby.
1826. Notice of Michigan, topography, etc., Pierce.
1829. Geology of Lake Superior, Bayfield.

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1834. Expedition to Itasca Lake, Schoolcraft.  
Expedition to northwestern Indiana, Allen and Schoolcraft.
1836. Region around Fort Winnebago, Wis., Ruggles.  
Reconnaissance from Washington to Coteau des Prairies, Featherstonhaugh.
1838. Report of State geologist of Michigan, 1837, Houghton.
1839. Report on Wayne and Monroe counties, Mich., Hubbard, B.  
Second report of State geologist of Michigan, Houghton.  
Ingham and parts of Eaton and Jackson counties, Mich., Douglass, C. C.
1840. Lenawee, Hillsdale, and other counties, Michigan, Hubbard, B.  
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Jackson, Calhoun, and other counties, Michigan, Douglass, C. C.  
Report on lead region of the Upper Mississippi, Locke.  
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1841. Boulders and scratches, Mather.  
Fourth report of geologist of Michigan, Houghton.  
Geology of organized counties of Michigan, Hubbard, B.  
Northern part of lower peninsula of Michigan, Douglass.
1842. Sand storms, and beds about the lakes, Schoolcraft.
1843. Geology of New York, first district, Mather.  
Region of basin of the Upper Mississippi, Nicollet.
1845. Excavation by recession of cata-racts, Featherstonhaugh.
1846. District south of Lake Superior, Burt and Hubbard.  
Observations on magnetic dip, Locke.
1847. Report of survey of Wisconsin and Iowa, Owen, D. D.  
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1847. Lacustrine deposits in vicinity of the Great Lakes, Lapham.  
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1848. Statistics of coal, Taylor, R. C.  
Reconnaissance of Chippewa district of Wisconsin, etc., Owen, D. D.; Norwood.
1849. Terraces, bars, drift, and polished surfaces of Lake Superior, Agassiz, L.
1850. Lake Superior, Agassiz, L.  
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1851. Beaches of Lake Michigan, Whittlesey.  
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Superficial drifts of Northwestern States, Whittlesey.  
Wells in red clay of Green Bay, Mich., Whittlesey.  
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1852. Drift of Northern and Western States, Whittlesey.  
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Report on valleys of Minnesota, Mississippi, and Wisconsin rivers, Shumard, B. F.  
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1854. Drift etchings, Lake Superior, Whittlesey.  
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1854. Map of Wisconsin, Iowa, and Minnesota, Owen, D. D.  
Expedition to sources of the Mississippi in 1832, Schoolcraft.
1855. Submerged forest at Fort Lawrence, Dawson, J. W.  
Survey of Wisconsin, Percival.  
Shell marls of Michigan, Winchell, A.
1856. Second report on survey of Wisconsin, Percival.
1858. Report on survey of Wisconsin for 1857, Daniels.  
Geology of North America, Marcou, J.
1859. Copper district of the Thessalon, etc., Murray, A.
1860. Drift cavities of Wisconsin, Whittlesey.
1861. First biennial report of survey of Michigan, Winchell, A.
1862. Report on survey of Wisconsin, Hall and Whitney.  
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1863. Geology, etc., of the Upper Mississippi, Hayden.
1865. Northward transportation of drift in lower Michigan, Winchell, A.  
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1866. Notes on Wisconsin drift, Bliss.  
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1867. Ice movements in valley of St. Lawrence, Whittlesey.  
Fresh-water Glacial drift of the Northwest, Whittlesey.
1868. Structure of southern Minnesota, Hall, J.
1869. Geology of portions of Minnesota, Hall, J.

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1869. Certain physical features of Upper Mississippi River, Warren, G. K.
1870. Recent changes in northeastern Wisconsin, Stuntz.
1871. Notizen aus Minnesota, Kloos.  
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Did a glacier flow from Lake Huron into Lake Erie, Stroop.  
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1872. Ancient lakes of Wisconsin, Knapp.  
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1875. Superficial geology of central North America, Dawson, J. W.  
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1876. Physical geology of Lake Superior, Whittlesey.  
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Rectification of geologic map of Michigan, Winchell, A.  
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Geology of central Wisconsin, Irving, R. D.  
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1878. Work in Penokee iron range, Irving, R. D.  
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1880. Report on central and western Minnesota, Upham.  
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1881. Geology of Upper Mississippi Valley, Winchell, N. H.  
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1837. Observation of banks of the Mississippi, Usher.
1843. Geology of New York, first district, Mather.
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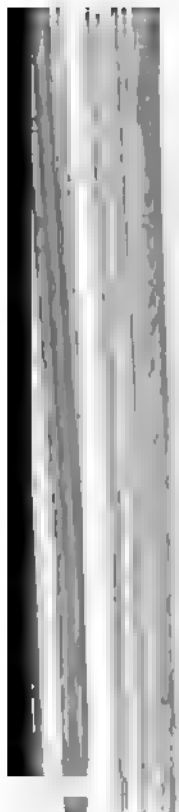
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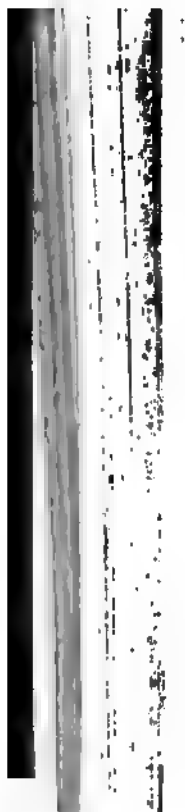
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1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.



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